

## 2016 U3A Course based on

### Dancing With the Unknown

A Book about FEELINGS and the Everyday Experience of MIND and SOUL

#### Session 4 – April 4, 2016

In the last session I told some of my personal story which took me, in my twenties and early thirties, into a state of great despair and such a feeling of failure that I doubted I would ever come out of it. There were two parts to this: I lost my belief in myself, my self-esteem and my feeling of identity as an individual and, secondly, my close personal relationships gradually fell apart. I am talking about this because I have learned from books like *An Intelligent Life* by Julian Short and many other places that these are, in one form or another, the most common deficiencies in wellness for all of us. You don't have to get as bad as I did to have experienced a sense of not liking yourself very much or to have failed in relationships and feel that you are not loved. I had a bad case of that having created a story over time that I was not much loved because I was not a very lovable person. Those two go together: if you don't like yourself it's hard for other people to like you very much either.

What happened as I started to recover was that I gave up thinking I should have all the answers to this problem and therefore had to work it all out in my head and I began to see and adopt what I now call a more spiritual attitude to life, by which I mean simply respecting and valuing the unknown. What we know is just a tiny drop in the ocean of all there is to know – that's what I believe anyway. It was the selfish ego part of my mind that was trying to tell me it knew a lot because I was a scientist studying physiology and behaviour and that I should be able to fix my problems by myself. I had forgotten the mindset I grew up with living on a farm that I was just a tiny part of everything – of nature – animals and plants and earth and sky. I had forgotten how to connect with the natural world and therefore with other people. I started to reconnect and then I realised that my love of biology and science could now be an asset for me. And that's still the reason that I teach this particular Course in U3A today.

I want to talk about *The Function of our Mind* today, which is the third Chapter in the new book, and why I think biology is so important for understanding our mind. This is going to be a challenge for you – perhaps the biggest challenge in the whole Course. Some of you have been through it before and embraced it with open arms, but there are new parts to it now that might still be a challenge. I'm offering you this scientific explanation because I believe in it and because it has been so helpful for me in understanding my own mind. If you like it I feel sure it can be helpful to any of you. If you don't, that's perfectly okay, too; you can just treat it as a curiosity. This is only one of many different ways of explaining the mind. I chose it because I was looking for the one that seems to work best in the everyday experience of life.

I want to describe the mind in terms of what it does rather than what it is, because of course it is not a substance, it is a *process* that we are immersed in at all times even as we are trying to explain it. In the English language we love naming *things*, but we can be quite vague about *processes*. More than 50% of our words are nouns and another 25% are adjectives that embellish the nouns whereas verbs, the doing words, make up less than 15% of our language. We are most comfortable with solid substance and rather wary of ever-changing flux. But there is no such thing as an unchanging mind – no object to point to that will still be there a moment later. We need to imagine it as a moving force.

I think it's probably impossible to work out the function of the mind from simply observing human

behaviour and trying to interpret it. Psychology gradually became more scientific whereby minds are manipulated experimentally to develop mechanistic cause-and-effect explanations, but these still don't get to the bottom of things. The alternative to that top-down approach for studying the mind is the bottom-up approach of basic biology. It is by studying the simplest living things and working our way up the evolutionary tree to humans that we can understand most clearly how the mind works.

The man who convinced me about this approach was the Chilean biologist, Humberto Maturana, whom I got to know personally from his visits to Australia and through correspondence. He is a legendary figure in international biology, but even so I think his contribution to mind science is still vastly underrated. For one thing it was his paradigm-changing 'biology of cognition' that explained the word, *love*, in a scientific way for the first time. Together with a former student and equally famous pioneer of mind science, Francisco Varela, he showed how the most basic biology could help us to understand the human mind. Varela's untimely death in 2001 at the age of 54 was a great loss.

I said that mind is the bedrock of biology because without that concept it's hard to imagine living things existing. From the very beginning they had to distinguish themselves from their immediate surroundings in order to be living things. The simple cell wall of the original single-celled being (possibly a bacterium) was the first example of a dividing line between the inside and the outside of an organism. This provided a mechanism for living things to become viable units in their own right by maintaining their internal processes in the face of an outside world that followed different rules, constantly changing independently of them and not necessarily in their best interests. That was the beginning of a very long line of entities that we call living things because they can coexist with their surroundings in ecological niches while preserving an individual identity by having a 'mind of their own.'

So in biological terms mind and life are one and the same. It requires an imaginative leap to think this way because our common usage of the word, mind, gives it peculiarly human characteristics and it has been closely associated with the workings of our brain for obvious reasons. When someone is on a life-support machine because his brain is ruined he is said to be a 'vegetable' and have no mind, but strictly speaking he is still a viable unit until the connecting tubes are removed and his life process ends. The human brain is an incredible organ and it is responsible for our most treasured experiences, but it is not our mind and its processes are not the full extent of our mind process. What scientists (particularly neuroscientists) tend to do is to explain everything in terms of the bit that they know something about. They take the whole of reality and experience to be the part of it that their methodology has revealed to them without considering the broader context in which this part operates. The explanation sounds good, but it contributes to the hubris of thinking we know more than we do, and can actually be misleading.

One reason we think of our mind as being uniquely human is that we have tried to separate ourselves from the natural world as if it is different from us and we think of it as a thing that is ours to own, forgetting that we are simply part of it – we are also living things just like all the other animals and plants. As a matter of fact there are several hundred different species of microorganisms living in and on each one of us. We are not on our own. This is a biosphere. We depend on plants to convert carbon dioxide to oxygen, plants and animals for our food, forest to maintain our atmosphere and so on. Most of all we share with all living things something we call our mind and the extent to which we lose touch with the natural world around us we are losing touch with our own mind. I said last time that mental health is deteriorating everywhere and this is one of the reasons.

If you look through a microscope at a primitive being like an amoeba or a paramecium, single-celled creatures that have no brain or nervous system, and watch them 'swimming' in their liquid world, you will notice that they can move away from a toxic substance or move towards a source

of food. If you use your imagination you will recognise this as the most elementary example of a mind at work; it is the most rudimentary ‘decision-making’ experience. They may not ‘know’ much, but they ‘know’ what to do to try to stay alive. Every living organism has some ability, albeit limited, to act so as to connect with its surroundings meaningfully, that is favourably – in a way that will meet the needs of its autonomous existence and give it a chance to go on living. Every living thing ‘hungers’ for life and employs its mind to try to satisfy this basic biological impulse.

The way living things adapt themselves to particular environments shows their mind to be their basic learning tool. Every organism is trying to adapt to its circumstances and to conserve this adaptation through generations and when large populations manage to do this successfully that species will thrive, at least for a while. Evolution refers to constant changes in this adaptation, but it is misleading to think of it simply as a competitive struggle or the ‘survival of the fittest’ as Darwinian thinking is often portrayed. For a while biology worshipped the idea of ‘selfish genes’ as the instruments of evolution, but it turned out that the singular role of individual genes had been greatly exaggerated, particularly for more recent evolution, and it is now recognised as a much more haphazard process of cultural change.

Consider the most basic things that you and I have to achieve every day. To stay alive we must maintain our internal environment within safe limits in the face of an external environment that is sometimes hostile - too cold or too hot or threatening in any number of ways. We could not do this without a subconscious process known as homeostasis, but we need to make lots of conscious decisions, too. We have to notice what is happening around us and decide where and how we will situate ourselves in our world, not just for survival, but right down to the company we keep and the feelings that we share with others.

There are two quite different kinds of process involved. Internally it is stability and continuity that we need – a coherent ongoing process that will essentially look after itself as long as we provide it with fuel and avoid external calamities. This came to be called biological *autonomy*. The outside world is foreign and not part of this internal process except that we need to engage with it, firstly to know what threats or opportunities exist and secondly to obtain our fuel. We need oxygen, water and food as well as social companions. To do this we must make appropriate *connections*, reaching out strategically with our senses and opening our protective barrier just enough to take in whatever we need. The task of connecting optimally at all times is a tricky one indeed!

If you hark back to what happened when I felt I was losing the proper use of my mind I hope that might become more meaningful in the light of this basic biology. I was losing my sense of self on the one hand and my relationships on the other. A living system cannot exist without being both *autonomous and connected* to its world. Those are the essential requirements for life and our wellbeing depends on how efficiently both of these functions are achieved. We live with a myriad of subtle threats to our autonomy and obstacles to our relationships, which is where our wellbeing suffers. The solution to our problems lies in optimising both our strength as individuals and the strength of our relationships, which is an enormous challenge; it is never going to be easy because these two often pull us in opposite directions. Later I will speak about love as the phenomenon that integrates these two forces.

Autonomy means self-governing, which arises from being self-producing (or *autopoietic*, to use Maturana’s term). Instead of being created by the action of outside forces such as a motor car is put together in a factory, a living thing is re-created in each moment from itself, as long as it has a functional mind and a sufficiently sustaining connection. We go on creating a new version of ourselves moment by moment until we can no longer do this, whereupon we die. Self-government does not mean separateness; in fact its connectivity is crucial, hence the importance of paying attention to our relationships. This gives us a working definition of what mind is: *the process that keeps us connected to our world in such a way that we retain our individual identities – our autonomy*.

The barrier that separates us from the outside world sufficiently well for our internal process to be

autonomous does not block out all outside influences, of course. The fluctuations in the outside world will have some impact on our insides, triggering adjustments, slowing down or speeding up some processes, producing reactions of various kinds. In the next session we will see that this is what we commonly refer to as *stress*. As we adapt better to our circumstances the perturbations become less severe. As long as these outside forces don't overwhelm and destroy our autonomous existence we will survive.

The crucial point is that *we are not determined by our surroundings* even though we are affected by them. This way of thinking not only came into my life after I emerged from the dark times, it has found its proper place in the culture of biological science only during my lifetime as well. I think the weak spot in the fabric of biology for some time has been the increasing reliance on machine metaphors that oversimplify our understanding of cause and effect.

When I started out the way we talked and thought about physiology (and psychology) was built around the principle of *stimulus and response*. The outside world created the stimuli and the organism responded, sometimes in a thoroughly predictable way (like a kneejerk reflex), but usually with individual variability. Behind this way of thinking is the simplistic, but pervasive, idea that the stimuli were the cause and what happened in our lives was the effect, albeit modulated by our internal state. I think this largely subconscious mindset has lured us towards our dependence on external remedies for any internal malaise. Certainly my own dark times were a manifestation of this way of thinking.

Nevertheless, we can be thankful that medical science thrived on that cause-and-effect way of thinking because, except for homeopathy, it is essentially allopathic, which means it treats disease by manipulating our system from the outside. We shouldn't forget that any external treatment is greatly assisted – often totally enabled – by the internal process of natural healing, except in those cases where it interferes with that. The well-known placebo effect and the rather haphazard history of potions and remedies shows that this natural healing process does not get the credit it deserves. While there have been huge improvements in human health generally, mental health does not seem to be improving; in many countries it has deteriorated. Some chronic diseases such as fibromyalgia and other auto-immune conditions that are said to be stress-related are also on the increase. I think we need a clearer understanding of what mind is and how it works to tackle these problems.

Mind (like life) is an extraordinary kind of force because it enables us to ***be and belong*** at the same time. It also seems to defy the physical law of entropy whereby matter must run down to a more disordered state inevitably. It is a great mystery of biology that living things differ from physical systems in that they actually become more complex and more ordered as they grow and develop – although they eventually die and decay. They achieve this by drawing energy from their physical surroundings while ever the motivation to live continues. Though we can explain the function of mind in a scientific way we can only wonder about what mystery is behind it, where it came from and where it will eventually take us. Our thoughts and philosophies about the meaning of life and what our purpose might be are secondary processes of our mind that we use to rationalise, and often obscure, what is our fundamental mind – a biologically-given impulse to live.

In the reality of our experience we think of our mind as a clever tool that enabled us to get through school, get a job, find a partner and enjoy knowing about all the things that make one's life interesting, appreciating beauty and feeling love. We may also think of it as a tormentor, the part that worries and frets, craving for certainty without ever finding it. It could also be the way our imagination connects us in wonder with something greater than ourselves bringing feelings of awe and gratitude. Beneath all this stupendous range and richness of human experience is the mind's most basic function of enabling us to ***be and belong***. That is the simplest way of describing it. We have a tendency to overcomplicate things as we add more layers of complexity and this can cause problems for our wellbeing.

BREAK

Before we finish I want to put this explanation of what our mind does into a broader and more philosophical perspective.

The function of our mind is to keep us connected to one another and our world in such a way that we don't cease to exist as an individual; whatever happens we retain our identity and autonomy as individuals, in fact we grow it and develop it as we go along. The two things we need our mind to do for us to survive is to give us *autonomy* and *connectedness*. We want more than survival, of course – we want to be happy, we desire a state that I am calling *wellness* or *wellbeing*, which means functioning well – being well. Our being depends a lot on our doing. That's why I posed the question at the beginning of the Course: how should we be using our mind to get the best results? We have choices about how we use our mind. But, as I also said, our mind does things to us that we are not even aware of and have no control over so I found it invaluable to admit that there are influential unknown factors involved and I am powerless to make my mind feel good just because I want it to. Then I said that what we can do is to pay attention to our relationships – our connectedness – because we are precious and valuable individuals, not because we control things, but because we are just one amongst many – one living thing amongst the billions of living things that this planet supports at this point in time.

In this Course I am emphasising *feelings* as the cutting edge of our minds because they are surely going to be the measure of our wellness. Your doctor or your neighbour might say that you are well or you look well, but that doesn't mean much if you don't feel well. Later I will explain more fully why it is our feelings that generate most of our meaning. Our sense of meaning is essentially subjective like our feelings, although rationalists will argue that the true meaning – the real meaning – has to be reasoned out objectively. Ever since scientific explanations came to occupy such a prominent place in our thinking we seem to have lost confidence in our subjectivity. We have managed to create two different kinds of world in which to live. One is the third-person objective world and the other is the first-person subjective world, which has become a bit of a 'shrinking violet.' We might almost apologise for saying we like a particular book or a painting or even a person because 'it's only my preference' as if that doesn't mean very much – though that doesn't always stop us from thinking that somebody else is stupid because they like something quite different!

Several philosophers have championed the idea that it is subjectivity that counts, not objectivity. Alfred North Whitehead (1861-1947) is perhaps the most famous of them; David Griffin, John Cobb and the late Charles Birch, a biologist from Sydney whom I admired very much, are also prominent in this regard. Whitehead argued that it is *not bits of stuff* that constitute our world as if they were billiard balls interacting with each other through cause and effect, it is *processes* – flowing changes that connect networks differently in each moment, which he called 'occasions of experience.' Reality is what we (or anything else) *experiences*. We can describe it objectively and that is useful for some purposes, but it also tends to fog up our understanding that reality is what we experience, which is a subjective phenomenon. These thinkers pioneered *pan-subjectivism*, which holds that everything must have the capability of subjective experience – this is not confined to humans. If you involve yourself with the natural world – in my case growing up on a farm and then doing research with animals – you can't help but notice that other animals experience something – they often show their emotions very clearly. To put it another way: the world is made up of a 'communion of subjects, not a collection of objects,' to paraphrase Thomas Berry. Charles Birch's last book called *Science and Soul*, published after he died, explains this very nicely.

The very latest book to address this is the one I mentioned last time by Andreas Weber (published in Canada this year) called *The Biology of Wonder*. I was excited about getting it, as I said, and I think it's an important book but I found it rather patchy and rambling and not well-referenced. It does have lots of interesting personal experiences and his basic idea is a very important message that I hope will be widely received. He says that *feeling is the foundation of all life* because it is what

enables even the simplest of minds to try to connect favourably with their surroundings in order to survive and flourish. He proposes that we can use the word, *feeling*, to describe the basic function of mind as a biological impulse. Whether it is an amoeba, a plant or a human, the function of mind is basically the same and it is driven by subjective, 'first-person' experience. At the same time this process is visible, even measurable, and therefore objective as well. Weber calls this 'empirical subjectivity.' The value in doing this, I think, is that it helps us to reunite the two worlds we have created – the objective with the subjective – which we need to do if we are to understand the process that we call our mind.

Of course the human mind is vastly different from that of any other living thing in ways that are extraordinarily exciting as we shall see in this Course. It is generally regarded as anthropomorphic to ascribe a human experience to other animals when we can't really know what it is like for them. I learned to be very wary of this in all my research with farm animals because the scientific method does not accommodate subjectivity very comfortably even though it doesn't deny it. I had to say the bull raised its head suddenly, flared its nostrils and charged at me – I couldn't really say it was angry and frightened.

But when it comes to defining the basic biology of mind I think the advantages of doing this outweigh the disadvantages because we shouldn't forget that we are also just another sentient (feeling) being in a biosphere that depends on mutuality and diversity for its survival. When we distance ourselves with false pride from the rest of our natural world and fail to interact respectfully with nature we are neglecting and harming a part of ourselves.

From now on I will be talking about subtleties and complications of our mind that are rich and exciting, but I think that the way to understand our mind and use it wisely is to start by saying what it is in its simplest, most basic, form. We try to perform all sorts of miracles with our mind, but the bottom line is that ***all our mind can ever do for us is to give us a feeling that we can both be and belong and show us how to do it.***

If we forget these basic principles that I've outlined today the way we use of our mind can become very confusing in its complications as I know from my experience. This is when the lies that Eckhart Tolle speaks about come into play and the greatest threats to our wellbeing arise. These complications lead to misconceptions about what we are supposed to be doing with our mind. I think these manifest most often as *unnecessary judgments* and *inappropriate attempts to control*. The personal opinions that arise from our judgments are not the problem; they fuel the everyday conversation that we need to manage our affairs and bring about change. And meanings are themselves judgments that our minds are processing internally. The problem is that *we tend to express far more detailed and more frequent judgments about other people and what is right and wrong than are actually needed and we overdo the use of our mind to control and manipulate our circumstances and other people*. These are subjects we will tackle in future sessions.

We also get confused about the importance of stress, which is the subject of the next session at the start of Term 2.